PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GLOBAL D, LLC.	03/14/2014

RECEIVING PARTY DATA

Name:	RAKUTEN, INC.
Street Address:	4-12-3 HIGASHISHINAGAWA
City:	SHINAGAWA-KU, TOKYO
State/Country:	JAPAN
Postal Code:	140-0002

PROPERTY NUMBERS Total: 68

Property Type	Number
Patent Number:	5689575
Patent Number:	5777614
Patent Number:	6570588
Patent Number:	6917920
Patent Number:	7047195
Patent Number:	7130801
Patent Number:	7117223
Patent Number:	5864808
Patent Number:	7010650
Patent Number:	7133966
Patent Number:	7131013
Patent Number:	7280354
Patent Number:	7420802
Patent Number:	7136977
Patent Number:	7848611
Patent Number:	7123977
Patent Number:	7437585
Patent Number:	7120767
Patent Number:	7412578
Patent Number:	7225196
Patent Number:	7039707
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PATENT

REEL: 032503 FRAME: 0237

Property Type	Number
Patent Number:	7240188
Patent Number:	7613871
Patent Number:	7617255
Patent Number:	7574554
Patent Number:	7369406
Patent Number:	7562109
Patent Number:	7272693
Patent Number:	7716438
Patent Number:	7724677
Patent Number:	7949882
Patent Number:	7227746
Patent Number:	7681001
Patent Number:	7673168
Patent Number:	7650475
Patent Number:	7680983
Patent Number:	7685310
Patent Number:	7694037
Patent Number:	7724515
Patent Number:	7609083
Patent Number:	7953574
Patent Number:	7643722
Patent Number:	7840820
Patent Number:	7827193
Patent Number:	7849264
Patent Number:	7900013
Patent Number:	7774640
Patent Number:	7895161
Patent Number:	7908510
Patent Number:	7783922
Patent Number:	7769721
Patent Number:	7849058
Patent Number:	7904746
Patent Number:	7859839
Patent Number:	7516199
Patent Number:	7069380
Patent Number:	7293131
Patent Number:	7797477
Patent Number:	7411947
Patent Number:	8098654

PATENT

REEL. 032503 FRAME. 0238

Property Type	Number
Patent Number:	7634625
Patent Number:	7818499
Patent Number:	7133282
Patent Number:	7849271
Patent Number:	7908446
Patent Number:	7624306
Patent Number:	7089453
Patent Number:	7305590

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ATTORNEY DOCKET NUMBER:	14015-803US
NAME OF SUBMITTER:	PETER MARTINEZ
SIGNATURE:	/Peter Martinez/
DATE SIGNED:	03/22/2014

Total Attachments: 6

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PATENT REEL: 032503 FRAME: 0239

ASSIGNMENT

WHEREAS, Global D. LLC., hereinafter referred to as ASSIGNOR, a corporation having its principal place of business at 2-1-16 Kita-Ueno, MY Bldg., Suite 701, Taito-ku, Tokyo, 110-0014, Japan, is, by virtue of assignments recorded at the United States Patent and Trademark Office, the owner of the entire right, title and interest in the invention(s) described and claimed in the following:

- United States Letters Patent No.: 5689575
 Entitled: Method and apparatus for processing images of facial expressions
- United States Letters Patent No.: 5777614
 Entitled: Editing support system including an interactive interface
- United States Letters Patent No.: 6570588
 Entitled: Editing support system including an interactive interface
- United States Letters Patent No.: 6917920
 Entitled: Speech translation device and computer readable medium
- United States Letters Patent No.: 7047195
 Entitled: Speech translation device and computer readable medium
- United States Letters Patent No.: 7130801
 Entitled: Method for speech interpretation service and speech interpretation server
- United States Letters Patent No.: 7117223
 Entitled: Method of interpretation service for voice on the phone
- United States Letters Patent No.: 5864808
 Entitled: Erroneous input processing method and apparatus in information processing system using composite input
- United States Letters Patent No.: 7010650
 Entitled: Multiple data management method, computer and storage device therefor
- United States Letters Patent No.: 7133966
 Entitled: Disk array device having spare disk drive and data sparing method
- United States Letters Patent No.: 7131013
 Entitled: Power supply control system and storage device for holding data just prior to the occurrence of an error
- United States Letters Patent No.: 7280354
 Entitled: Disk array device

PATENT REEL: 032503 FRAME: 0240 United States Letters Patent No.: 7420802
 Entitled: Disk array device

United States Letters Patent No.: 7136977
 Entitled: Backup acquisition method and disk array apparatus

United States Letters Patent No.: 7848611
 Entitled: Storage system and digital broadcasting system

United States Letters Patent No.: 7123977
 Entitled: Production planning system

17. United States Letters Patent No.: 7437585

Entitled: Storage system and power control method therefor, adapter and power control method therefor, and storage controller and control method therefor

- United States Letters Patent No.: 7120767
 Entitled: Snapshot creating method and apparatus
- United States Letters Patent No.: 7412578
 Entitled: Snapshot creating method and apparatus
- United States Letters Patent No.: 7225196
 Entitled: Data conversion method and computer system therefor
- United States Letters Patent No.: 7039707
 Entitled: Disk subsystem, computer system, storage managing method and program
- United States Letters Patent No.: 7240188
 Entitled: Storage system
- United States Letters Patent No.: 7613871
 Entitled: Storage system using a flash memory partitioned with write-once and rewritable blocks
- 24. United States Letters Patent No.: 7617255 Entitled: Storage system, storage control device and recovery point detection method for storage control device
- United States Letters Patent No.: 7574554
 Entitled: Storage system and data protection method therefor
- United States Letters Patent No.: 7369406 Entitled: Disk array apparatus

United States Letters Patent No.: 7562109
 Entitled: Connectivity confirmation method for network storage device and host computer

- United States Letters Patent No.: 7272693
 Entitled: Storage system and back-up method for storage system
- United States Letters Patent No.: 7716438
 Entitled: Storage system and back-up method for storage system
- United States Letters Patent No.: 7724677
 Entitled: Storage system and method for connectivity checking
- United States Letters Patent No.: 7949882
 Entitled: Storage session management system in storage area network
- United States Letters Patent No.: 7227746
 Entitled: Storage system
- United States Letters Patent No.: 7681001
 Entitled: Storage system
- United States Letters Patent No.: 7673168
 Entitled: Network node, switch, and network failure recovery method
- United States Letters Patent No.: 7650475
 Entitled: Storage system and method for managing data using the same
- United States Letters Patent No.: 7680983
 Entitled: Method of restoring data by CDP utilizing file system information
- United States Letters Patent No.: 7685310
 Entitled: Computer system and dynamic port allocation method
- United States Letters Patent No.: 7694037
 Entitled: Information processing apparatus and command multiplicity control method wherein commands are sent from a host to a target using iSCSI control protocol
- United States Letters Patent No.: 7724515
 Entitled: Disk array apparatus
- 40. United States Letters Patent No.: 7609083
 Entitled: Semiconductor integrated circuit device and storage apparatus having the same
- United States Letters Patent No.: 7953574
 Entitled: Methods and apparatuses for heat management in information systems

42.	United States Letters Patent No.: 7643722
	Entitled: Video storage system

- United States Letters Patent No.: 7840820
 Entitled: Storage system and method of controlling of feeding power to storage system
- United States Letters Patent No.: 7827193
 Entitled: File sharing system, file sharing device and file sharing volume migration method
- United States Letters Patent No.: 7849264
 Entitled: Storage area management method for a storage system
- United States Letters Patent No.: 7900013
 Entitled: Method and computer for determining storage device
- United States Letters Patent No.: 7774640
 Entitled: Disk array apparatus
- 48. United States Letters Patent No.: 7895161
 Entitled: Storage system and method of managing data using same
- United States Letters Patent No.: 7908510
 Entitled: Storage system and method of designing disaster recovery constitution
- United States Letters Patent No.: 7783922
 Entitled: Storage controller, and storage device failure detection method
- United States Letters Patent No.: 7769721
 Entitled: Data recovery method in differential remote backup for a NAS system
- 52. United States Letters Patent No.: 7849058
 Entitled: Storage system determining execution of backup of data according to quality of WAN
- United States Letters Patent No.: 7904746
 Entitled: Information processing system and data recovery method
- United States Letters Patent No.: 7859839
 Entitled: Storage apparatus, fan device, and controller unit device
- United States Letters Patent No.: 7516199
 Entitled: Storage device managing system, method and program
- United States Letters Patent No.: 7069380
 Entitled: File access method in storage-device system, and programs for the file access

- United States Letters Patent No.: 7293131
 Entitled: Access to disk storage using file attribute information
- United States Letters Patent No.: 7797477
 Entitled: File access method in a storage system, and programs for performing the file access
- United States Letters Patent No.: 7411947
 Entitled: Storage system, computer system and interface module
- United States Letters Patent No.: 8098654
 Entitled: Storage system, computer system and interface module
- 61. United States Letters Patent No.: 7634625
 Entitled: Storage system and method for copying volumes by inspection of data security
- United States Letters Patent No.: 7818499
 Entitled: Methods and apparatuses for heat management in storage systems
- 63. United States Letters Patent No.: 7133282 Entitled: Disk array device
- United States Letters Patent No.: 7849271
 Entitled: System and method for intrusion protection of network storage
- United States Letters Patent No.: 7908446
 Entitled: Copy system and method using differential bitmap
- United States Letters Patent No.: 7624306
 Entitled: Switch device, storage control system and trace data obtaining method
- United States Letters Patent No.: 7089453
 Entitled: Switch device, storage control system and trace data obtaining method
- 68. United States Letters Patent No.: 7305590 Entitled: Switch device, storage control system and trace data obtaining method

WHEREAS, <u>Rakuten</u>, <u>Inc.</u>, hereinafter referred to as ASSIGNEE, a corporation duly organized under the laws of Japan and having its principal place of business at <u>4-12-3</u> <u>Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan</u>, is desirous of acquiring the entire right, title and interest as held by ASSIGNOR in, to and under the said Letters Patents, and the inventions embodied therein;

5

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: be it known that in consideration of a prior payment by ASSIGNEE to ASSIGNOR, the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR hereby sells, assigns, and transfers to ASSIGNEE, its entire right, title, and interest in and to said Letters Patent(s) and the invention(s) therein, for the full term of the said Patents and any subsequent patens thereof.

IN WITNESS WHEREOF, the undersigned ASSIGNOR has hereunto set hand and seal this $\underline{i+}$ day of \underline{March} , $\underline{2014}$.

Global D,	LLC.
Ciobai	υ,

Signature of Representative:

Name: Tsuyoshi Masutani

Title: Member

RECORDED: 03/22/2014

6

PATENT REEL: 032503 FRAME: 0245